

REMARKS

Claims 1-35 are pending in this application. No claims were amended, cancelled or added.

35 U.S.C. §103 Rejections

Claims 1-35 stand rejected under 35 U.S.C. §103(a) for obviousness over U.S. Patent No. 5,980,096 to Thalhammer-Reyero (hereinafter "the Thalhammer patent") in view of U.S. Patent No. 6,523,172 to Martinez-Guerra et al. (hereinafter "the Martinez patent").

The Thalhammer patent discloses a computer-based graphical interface having a shell environment for development of visual modeling and simulation relating to complex chemical and biological systems. The interface is operative on a dynamic knowledge base organized into knowledge structures that adhere to object-oriented design methodology (e.g., classes and their objects). In effect, the Thalhammer patent discloses a system that allows non-programmer researchers to maintain and modify the knowledge contained within the knowledge base without needing to know the various levels of abstraction of the system. The exemplary knowledge base discussed in the Thalhammer patent relates to biochemical processes.

In contrast, the present invention relates to the field of natural language parsing and analysis/validation of parsed data. A system and method of the present invention acts on requests and queries received from users regarding complex data maintained in a structured form (e.g., in a database). Generally, the method includes the steps of receiving input, matching the input to a pattern, querying structured data based on instructions contained in a rule containing the pattern, using the result of the structured data inquiry to determine the validity or invalidity of a logical statement, recognizing or not recognizing the input based upon the validity or invalidity of the logical statement, triggering the rule, and generating a response. More specifically, the present invention is a method for processing

input entered by a user and providing at least one response in a system for autonomously processing requests. A set of rules is provided. A user enters an input or a request. For each rule in the set, it is determined whether the input is recognized. If the input is recognized, an appropriate response is sent to the user.

Applicants respectfully disagree with the Examiner's rejections because the Examiner is citing non-analogous art and is making incorrect arguments with respect to that art. Specifically, the Examiner is equating the limitations of the claims of the present application with portions of the prior art patents that are either presented out of context with respect to the other limitations of the same claim, or are simply not disclosed in the prior art.

For example, a limitation of claim 1 requires "attempting to match the input to at least one pattern..., if no match is found, not recognizing the input and continuing to the next rule, and if a match is found..., either:...." The Examiner points to column 42, lines 53-64 of the Thalhammer patent in an attempt to show that this limitation is met. However, this specific text relates to a development environment shell in which a user interacts with schematic tools of a visual workspace (See column 42, lines 1-6). Each biological process is represented as a class or subclass, with each class or subclass having objects associated therewith. Each class or subclasses may be "connected" to each other if they are similar (column 42, lines 28-31). From a visual standpoint, the relationship between classes is color-coded to allow for easier development of the knowledge base by the researchers/modelers. Thus, the only "matching" that is disclosed in the cited sections of the Thalhammer patent relates to the act of connecting classes by matching the on-screen color pattern associated with each class. It is, therefore, fair to say that the Examiner has equated the "input" to a class/subclass and the "pattern" to a color. As discussed throughout the Thalhammer patent, the classes (e.g, bioPool, bioReactand, bioEngine, etc.) are pre-defined within the knowledge base. Therefore, the classes cannot be equated to "input" in the

traditional sense, as "input" is "entered by the user" in the limitations of claim 1. Accordingly, this limitation of claim 1 is not anticipated by the Thalhammer patent.

In any case, Applicants wish to point out that the Examiner is required to maintain the same consistent definition of "input" throughout a claim and claims depending therefrom. The "input" addressed by the Examiner in the above-identified limitation cannot be equated to the input referred to in the earlier claim 1 limitation requiring the step of "determining if the input is recognized." In this particular limitation, the term "input" is equated by the Examiner to mean the type of data that is translated from the real world into a digital form for manipulation within the development environment shell (column 8, lines 6-10). Thus, even if one were to accept the Examiner's incorrect assertion that a class/subclass may be equated to input, there is a lack of consistency with respect to maintaining the same meaning of "input" throughout the claims.

Another example illustrating the inapplicability of the Thalhammer patent with respect to the claims is seen in the argument with respect to the limitation that requires the step of "executing at least one statement validator to determine if the input is appropriately matched by the rule...." The Examiner points to column 9, lines 54-55 to show that "[i]f the results coincide, the results validate the model." There is no explanation given as to how this phrase even remotely relates to a statement validator (as set forth in Applicants' specification) or equivalent feature. Furthermore, nothing near or around this cited phrase discusses any type of validation that occurs to determine if an input is matched to the rule. Accordingly, this limitation of claim 1 is not anticipated by the Thalhammer patent.

Of note, Applicants wish to point out that various rejections of the dependent claims are also improper, as the prior art does not anticipate the claimed limitations. For example, claim 2 requires an evaluation of a logic statement (via the statement validator) to evaluate a statement to true or false. The Examiner points to column 116, lines 15-16 of the

Thalhammer patent in an attempt to show that this limitation is met. However, as shown in this specific text and in FIG. 29 of the Thalhammer patent, the true/false aspect relates to a data structure containing either a true or false value for a given experiment. Clearly, there is no showing here of a computational step in which a logic statement is evaluated to a non-predetermined true or a non-pre-determined false value.

In summation, various limitations of claim 1 (and the claims depending therefrom) are simply not disclosed, taught, or suggested in the Thalhammer patent. Additionally, various terminology of claim 1 has been inconsistently construed in relation to identical terminology appearing elsewhere in claim 1.

The Examiner asserts that the Thalhammer patent does not explicitly indicate the step of "recognizing input..." and cites the Martinez patent for the notion that it teaches this step. However, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). As the primary reference (i.e., the Thalhammer patent) does not anticipate numerous limitations of claim 1, in whole or in part, the Examiner's secondary reference (i.e., the Martinez patent), is not a relevant reference with respect to serving as an obviating reference for independent claim 1. Accordingly, Applicants submit that independent claim 1 is not obvious in light of the prior art of record. It has been held that if an independent claim is non-obvious under 35 U.S.C. §103, then any claim depending therefrom is non-obvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); (MPEP §2143.03). Therefore, Applicants also submit that claims 2-19 depending from independent claim 1 are non-obvious.

For the foregoing reasons, the Applicants believe that the subject matter of independent claim 1 is not rendered obvious by the Thalhammer patent in view of the Martinez patent. Reconsideration of the rejection of claim 1 is respectfully requested.

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Claims 2-19 depend from and add further limitations to independent claim 1 and are believed to be patentable for the reasons discussed hereinabove in connection with independent claim 1. Reconsideration of the rejections of claims 2-19 is also respectfully requested.

The Examiner asserts that claims 20-35 contain the same subject matter as claims 1-19, and are therefore, rejected for the same reasons as discussed in connection with the rejections of claims 1-19. To address the rejections of claims 20-35, Applicants hereby submit the same arguments presented above with respect to the rejections of claims 1-19. Accordingly, Applicants believe that the subject matter of claims 20-35 is not rendered obvious by the Thalhammer patent in view of the Martinez patent. Reconsideration of the rejections of claims 20-35 is respectfully requested.


CONCLUSION

Based on the foregoing remarks, reconsideration of the rejections and allowance of pending claims 1-35 are respectfully requested.

Respectfully submitted,

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